CHAPTER - I

THE CONCEPTUAL FRAMEWORK OF THE PROBLEM

Outline

I. The variate Structure And Conceptual Framework.

II. The Somato-Psychological Aspect

...Objectives of the Study...
It is a psychological study of the dynamics of behaviour in the patients of laryngo-pharyngeal cancer. The correlate of behaviour in focus being learned helplessness.

I. THE VARIATE STRUCTURE AND CONCEPTUAL FRAMEWORK

Learned helplessness:

The term 'Learned helplessness' was used by Seligman et al to describe the results of learning to be unable to control events. Seligman (1974, 1975) has suggested that increasing one's feelings of control is adaptive. It is a attribute of helplessness that creates problem for the individual. In several studies, Seligman found that animals who learned they were helpless could not function adequately when placed in a situation in which they were no longer helpless.

Seligman and Maier (1967) in a number of experimental situations exposed animals to a number of shocks from which they could not escape. Later, when they were given the opportunity to escape from the shocks simply by jumping from one compartment of the experimental apparatus to another, they failed to learn this simple
response. Animals who had never experienced the inescapable shocks easily learned to escape by jumping from one compartment to another which was safe. Seligman attributed learned helplessness to the fact that the animals first learned that they would be shocked no matter what they did and that this punishment was inescapable. He reasoned that when they were put into a situation where their responses could have terminated the shock, their motivation and cognitive functioning were reduced and this lowered their ability to learn to escape. Wortman and Brehn (1975) have stated that there is good reason to believe that exposure to uncontrollable outcomes can result in profound psychological upset. Many kinds of maladaptive behaviour have been attributed to the feeling of helplessness with respect to one's environment. Seligman (1975) has observed that when people cannot control their environment, a sense of sadness and hopelessness occurs. The inability to control the life is apparently a powerful stimulus.

Investigators have argued that the helplessness stemming from feelings of lack of control is an important factor in the development of such psychiatric disorders as depression and schizophrenia (Bateson, et al 1965; Seligman, 1974, 75). The feeling of helplessness interferes'
with the ability to respond adaptively in stressful situation (Cofer and Appley, 1964; Janis, 1958 and Janis and Leverthal, 1968). Individuals can learn to cope with both, the known and the unknown, with varying degree of success. Unfortunately, they can also learn how not to cope (Dhar et al., 1987).

The feeling of helplessness has also been proposed as a precursor of physical disease (Engle, 1968; Schwel, 1971). The perception of inability to exert control over one’s environment can even result in sudden death from a disease or other factors (Richter, 1957, Greene et al 1972). The feeling of lack of control has also been viewed as a cause of many type of anti-social behaviour (Lamberth, 1980).

Learned helplessness (LH) has also been demonstrated in human beings. Hiroto and Seligman (1975) exposed subjects first to a set of soluble or insoluble problems and then gave them anagrams to solve. The group that had first worked on insoluble problems did much more poorly on the anagrams than did the group that worked on the soluble problems. Strassman et al (1956) have reported that prisoners of war often become listless, apathetic and detached due to continuous and unavoidable pain, and punishment, if the feel that no action on
their part will change their state of helplessness. Hirote (1974) showed that if humans are subjected to an unavoidable loud noise for a long time. On getting a chance to learn to stop that noise, they will fail to acquire the simple solution because they had learned to believe that anything they did would be unsuccessful.

Some other studies have replicated these results and further established that more experience subjects had with insoluble problems, greater was the feeling of helpless and lower was their performance on later tasks (Roth and Kubal, 1975). There are many examples of this phenomenon in everyday life. For instance a child who is forced to continue to try to develop a skill of which he or she is developmentally incapable will often refuse to attempt that activity later when it is possible to achieve.

A sense of helplessness leading to an inability to respond effectively is certainly a part of the everyday life. Many people who suffer a series of defeats will give up or quit trying even though continued effort might lead to success. Students become discouraged in the job market. Many people feel that they are in a rut but seem incapable of doing anything about it. In short, continued frustration can lead people to believe
that things are hopeless and that any response they make won't do any good any way (Houston et al 1983).

Apparently, exposure to uncontrollable positive events does not lead to learned helplessness (Benson and Kennelly, 1976). Exposure to uncontrollable negative events seems to result in this negative outcome on one hand, whereas exposure to controllable events can lead to increased performance on the other hand (Eisenberger et al, 1976).

McClure, Jone (1985) reexamined experiments on learned helplessness that had been interpreted previously as involving a solitary person experiencing uncontrollable and inescapable events. An alternative interpretation is that outcomes in learned helplessness experiments, rather than being uncontrollable, are controlled by the experimenter. Helplessness could be reduced by transferring this control to subjects, giving them control over their contingencies. This analysis had implications regarding both, the accuracy of depressed people's perception and desirability of making depressed people perceive an internal locus of control. It is further suggested that depressed people should have more control over their contingencies.
Chung, Yaw-chia and Hwang, Kwang-Kuo (1981) investigated relationship among causal attribution of performance, learning motivation and personality traits of helplessness in 510 Junior high school students canonical analysis indicated that a specific attributional style was strongly related to the psychological state of learned helplessness. Subjects who tended not to attribute their successes to ability and effort and who tended to attribute their failures to lack of ability were lower in performance expectations, persistence of study self esteem, sense of well-being and academic achievements than other subjects.

The study proceed with independent variables of Laryngo-pharyngeal cancer and age. The relevance of their selection being as under:

a) Laryngo-pharyngeal cancer:

There are so many diseases in the present era and cancer is one of the most dreadful ones. Cancer is a generic term for a wide variety of malignant neoplasms that may result in deleterious effects on the host due to their invasive and metastasizing character. Cancer is a disease of the cell that is transferred to the descendents of the cell. Since this disease is one of
the most important causes of death, it has been a major subject of research during the past few decades. Malignant tumors arising from the epithelial cells are called "carcinomas" whereas those from connective tissues are called "sarcomas".

Larynx and pharynx cancer is very common. The larynx or voice box opens off the lower part of the pharynx and is continuous below with the trachea. This box is kept rigid by a no. of hyaline and elastic cartilages which are united by membranes. It is lined with mucous membrane internally and is covered with voluntary muscles externally. Its external structure has chief cartilages which are (1) the thyroid cartilage (2) the cricoid cartilage (3) arytenoid cartilage and (4) epiglottic cartilage. The entrance to the larynx is oblique. It is bounded by the upper border of the epiglottis, the aryepiglottic fold with the contained upper ends of the cuneiform and corniculate cartilages and the mucous membrane covering the upper border of arytenoid cartilage. Three parts of laryngeal cavity are (i) the upper or vestibule (ii) on each side of the middle part the canoe-shaped depression between the vestibular and vocal folds is called ventricle (iii) the interior
part of intraglottic cavity. The vocal folds are the glottis and slit between them, the rimaglottic.

Cancer rarely develops in a normal larynx. In at least half the cases of laryngeal cancer, precancerous lesions antedate the malignant growth. The larynx cancer can be divided into three separate regions: supraglottic, glottic and subglottic. The most cancers of the larynx is squamous cell carcinoma of varying degrees of malignant potential. The supraglottic tumors included the lesions arising from the laryngeal surface or the rim of the epiglottis, aryepiglottic fold, arytenoid, false cord and laryngeal ventricle. Glottic tumors originate from the vocal cord and anterior and posterior commissures. The subglottic lesions arise from the area approximately 1 cm inferior to the true cord down to the lower border of the cricoid cartilage or the first tracheal ring.

The pharynx is merely passage and like the mouth is protected by stratified squamous epithelium. The muscular coat of the pharynx though voluntary in structure, is not under voluntary control. It descends on the vertebra from the base to the level of the 6th cervical vertebra. At the cricoid cartilage, it is continuous with the esophagus. Pharyngeal wall has four coats (i) areolar (ii) muscular (iii) fibrous and (iv) mucous.
There are three constrictors—Superior, middle and inferior. Each is fan-shaped and each is fixed interiorly by its narrower end or handle. On the side walls of the pharynx, there are spaces above and below their narrow handles of origin. Through these spaces pass vessels, nerves, muscles and the auditory tube.

U.S. Surgeon's General Report on Smoking and Health showed a strong correlation between heavy smoking and this cancer. Excessive alcohol intake is also frequently associated and leads to the cancer of the supraglottic larynx and hypopharynx. Hasbell et al (1980) observed that alcohol, tobacco, vocal abuse and chronic laryngitis play important role in the etiology of precancerous lesions. Epidemiological studies have also shown that relative risk of having cancer of the larynx increases in proportion to the amount of alcohol consumption by smokers. Workers in nickel refineries in Norway have shown a greater than expected incidence of this cancer. It can be concluded that such factors put subjects to a higher risk to cancer.

Local habits play a distinct role in the high rate of this cancer in India. Not being able to afford the cost of usual type of cigarette, most people smoke 'bidi', the Indian form of cigarette made by rolling
by hand a small quantity of tobacco placed in dried leaves of a tree of the ebony family rather than in the usual paper of cigarette. A bidi is usually 5 cm in length and contains an average 0.216 gms of tobacco whereas a regular cigarette is 7 cm. long and holds an average 0.973 gms of tobacco. This means when a person smokes 45 bidies, he had smoked an amount of tobacco equivalent to 10 cigarettes. The tobacco used in bidi is not chemically processed. Another habit is that of chewing betel leaf, betel nut etc. This preparation of betel leaf is called 'pan' and its contents vary from place to place. Serious consideration should be paid to nutrition, with special reference to the quality of diet and also to the habits of cleaning the teeth and mouth.

DelRegato et al (1977) observed patients more closely to hoarseness¹ which may end in complete aphonia² Dyspnea³ is often common in patients with tumours of subglottis. Cough is not common. Odynophagia⁴ is more commonly associated with laryngo-pharynx and advanced endolaryngeal. Sore throat or pharyngeal pain is a common complaint with supraglottic cancer.

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1. Patient feels heaviness of voice.
2. Alisence of voice.
3. Difficulty in breathing.
4. Difficulty in swallowing.
With increasing technological progress, the examination of cancer is also accomplished indirectly with a mirror. X-ray, laminograph and Xeroradiography are other means of radiographical examination of this cancer. There is little doubt that radiation thereby and surgery must be closely integrated. Irradiation may be employed as a primary curation modality as a planned part of combined therapy before or after surgery or for palliation.

Hasbell et al (1980) have observed that specific types of therapy selected several considerations such as patient's age, occupational and social needs for precise, vocalization, case of laryngeal and pharyngeal evaluation, personal habits such as smoking and the degree of alcohol consumption, general health and family support.

During the past three decades numerous observers have reported on the increased frequency of laryngopharyngeal cancer in the various parts of India. A recent study of 125,000 cases of proved cancer collected from 15 hospitals in this country revealed that this cancer has accounted for 35% of all malignant neoplasma. This percentage varies from 20 to 50 in some of the hospitals.
The investigations indicate that sarcomas cell calcinomas which arise from specific anatomic structures contained within the larynx and pharynx do not behave uniformly but occasionally show basic differences as regards rapidity of growth, clinical behaviour, response to therapy and ultimate prognosis.

This disease has a multifactorial ideology and no single cause can be responsible for its occurrence. It has been related to smoking status, education, degree of worry, health improvement behaviour, age, ethnicity and frequency of death worry (Stone and Siegal, 1987). And there are so many problems of cancer patients related to functional health status body-image, weight maintenance, worry and sexual dysfunction (Schag and Richard, 1988).

(b) Age:

This cancer is predominantly a disease of the male in the fifth, sixth and seventh decades of life. It is 8.1 per 100,000 for males and .9 per 100,000 for females (U.S. Surgeons, 1959). Analysis of data to determine the relationship between age and stage of cancer at the time of diagnosis indicate that for cancers of the thyroid, breast, larynx and pharynx, there were significant linear trends for the cancer
to he diagnosed at more advanced stages in older Ss. (Goodwin, James S. et al, 1982) Stocks (1958) has discussed this cancer and its morality trends, and pointed out that between the age of 40 and 60, it occurs. As the significance of this variable cannot be ignored, it has been kept in view while framing the problem for study.

II. THE SOMATO-PSYCHOLOGICAL ASPECT:

The term "psychosomatic" is typically applied to those physical disorders in which emotional stresses have led to identifiable organic pathology. The concept of psychosomatic illness is an old one, Barber and associates have coined the term 'somatopsychology'. In somatopsychology the individual's body is regarded as a tool for behaviour and as an object with social significance to himself and others. Exploratory studies have been conducted on the psychological effect of many types of physical disability including deafness, blindness, amputation, facial disfigurement, tuberculosis, polio-myelities, multiple sclerosis, Paraplegia, leprosy ischemic/coronary heart disease (Chauhan et al, 1981, 1982, 1983, 1984, Agarwal and Dhar, 1983, 1984; Dhar, 1983; Kohli and Dhar, 1986; Hatter, 1986; Mehta and Dhar, 1987;
Many researches have been conducted in the area of cancer; reactions to diagnosis of cancer and to their subsequent hospitalization and treatment also provide a fruitful field for psychological counseling for the acceptance of death has much to contribute to the patients, emotional well-being. The somato-psychology is an area of psychology which has been largely neglected, but at the same time its importance is gradually being recognized by investigators working in the area of applied psychology.

III. OBJECTIVES OF THE STUDY:

The objectives of the present study may be specified as under:

1. To determine the impact of laryngo-pharyngeal cancer and age upon the learned helplessness.
2. To determine the interaction among laryngo-pharyngeal cancer and age correlated with learned helplessness in the patients of laryngo-pharyngeal cancer as well as the those who are free of it i.e. normals.
3. To prepare a factual base for creative and educational programmes that remain neglected despite being crucial in the context.
4. To open up new writes for further research in applied psychology.